CHAPTER VI

INSTRUMENTS OF MONETARY MANAGEMENT (General) II.

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CHAPTER VI.

INSTRUMENTS OF MONETARY MANAGEMENT (GENERAL) II.

OPEN MARKET OPERATIONS.

VARIABLE RESERVE REQUIREMENTS.

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I. OPEN MARKET OPERATIONS:

Nature of the control measure:

The technique of open market operations as a measure of monetary control is of recent origin compared to Discount rate policy. This technique primarily developed with the Federal Reserve System. In the early twenties the Federal Reserve Banks in their "endeavour to bolster their revenues with suitable earning assets"[1] engaged in such operations and they were happy to realise that such operations affected the reserve positions of commercial banks. Thus what was a measure for enhancing earning capacity of the Central Bank finally turned out to be a measure for controlling bank credit.

The term 'open market' technically connotes the existence of a perfectly competitive market for securities, implying in essence the 'width, depth and resiliency' of the market. Viewed this way the market for Government

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1. Karl Brunner and A.H.Meltzer in "Readings in Money, National Income and Stabilization Policy". (Eds. Smith and Teigen)P. 197.

securities is considered to be 'thin' or 'narrow' in underdeveloped countries. We deal with this structural aspect later in this chapter but it may be good to note here the contention that "narrow (securities) markets may be (even) more competitive than commodity markets".[1]

The legal framework of a Central Bank would determine the types of securities, it may deal in, ranging from gold, foreign exchange, securities floated by itself; government securities and securities of the local authorities. By far however, the bulk of dealing remains in government securities. Section 17(8) of the Reserve Bank of India Act constitutes the legal base of its operations and it does not impose any limitation as to either the quantity or the maturity of the securities which the Bank may deal in. The dealings are governed however, in India, as elsewhere by the specific objectives that the Central Bank would seek to pursue.

Objectives of open market operations:

Open market operations being a 'fine' instrument can be relied upon to bring about smooth and day-to-day adjustments. Again since they are continuously being undertaken they can be made to serve the purpose of (i) meeting with seasonal ebb and flow of credit (true for

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1. "Open market operations of the Reserve Bank of India" Reserve Bank of India Bulletin (December, 1964). Pp. 1496-1504.

India as well as other developed countries but more particularly so for underdeveloped countries); (ii) pursuing stabilization policy and (iii) maintaining orderly conditions in the government securities market.

Open market operations being a smooth, continuous and flexible instrument is assigned primacy among general instruments of control by several monetary economists (W.L. Smith; J. Aschheim etc.)

Open market operations and public debt management:

Although a monetary measure, open market operations have a linkage with the public debt management policy. These operations may have a purely 'monetary' or purely 'fiscal' intent or a combination of the two. The purely fiscal intent of carrying out a borrowing programme of the government or the maintenance of 'orderly conditions' in the securities market would have however, monetary effects and it thus becomes difficult to separate both the effects. A distinction which ultimately runs down to a distinction between monetary and fiscal policies, is made in terms of a change in the size of the debt (a matter for fiscal policy) and a change in the composition of the debt (a matter for monetary policy). The Radcliffe Committee opined that 'debt management lies at the heart of monetary control' and that the two things 'are one and indivisible'[1].

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1. Radcliffe Committee Report H.M.S.O. (1959) Para 603.

Tobin[1] would accept the distinction made above but he makes the essential point that there would be both fiscal and monetary effects of a change in the size of the budget. The fiscal effect operates via a change in private income due to budget deficit or surplus while the monetary effect of the same operations works by changing the size and composition of private wealth. He also asserts that the fiscal effect is temporary while the monetary effect is permanent. It is however, expedient to identify dealings in government securities by the Central Bank with a given size of the debt as monetary operations.

Modus operandi of Open market operations :

The technique of open market operations owes its existence to the enormous increase in the size of public debt over the last about half a century. The growing public debt as asserted by W.L. Smith and J.A. Aschheim has proved a "source of strength" to the monetary authorities. Open market operations are supposed to create (i) reserves effect, (ii) interest rate effect, (iii) wealth effect and (iv) announcement effect. Smith[2]

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1. J. Tobin "An essay on principles of debt management" - Fiscal & Debt Management Policies (a C.M.C. Study Publication), Prentice Hall (1961) Pp. 143-52.

2. "One of the advantages of open market operations is that they are necessarily being carried out continuously and are largely devoid of so called announcement effects". W.L. Smith, "Readings in Money, National Income and Stabilization Policy". P. 237.

considers that the last effect is, really speaking, absent with open market operations and this together with the advantage in terms of flexibility with respect to timing and magnitude of monetary action establishes their primacy over discount rates. Whether or not the announcement effect is produced would conceivably depend upon whether the first three effects have exercised their influence. If these are absent, we could not possibly say that the announcement effect has made itself felt. The announcement effect could, therefore, be, at best, a supporting factor (i.e. not having any perversity about it) rather than one working independently.[1] The (i), (ii) and (iii) effects stand out separately in order of their proximity of influence on the level of economic activity. The first impact would obviously be on the reserve positions of banks which would affect their capacity to create credit. The magnitude of the effect will be determined by the ratio of currency in money supply with the public as well as the cash reserve ratio of the commercial banks. A higher (lower) value of both the ratios would reduce the degree of effect of open market operations. If S is the value of (say) the sale of securities by the Central Bank, n is currency ratio of money supply and r is the reserve ratio of commercial banks, the resulting change (reduction

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1. The 'grooming' operations of the Reserve Bank of India do contain an element of 'announcement effect' in the sense in which the 'grooming' action manifests itself.

in money supply will be equal to

$$S. \frac{1}{n+r(1-n)}$$

The interest effect is an important aspect of the mechanism of open market operations. The stock of government securities outstanding being given, an act of purchase (sale) creates excess demand (supply) and thus raise (lower) the price of securities and thereby lower (raise) the rate of interest. This direct interest effect will have indirect effect in the form of 'wealth effect'. A rise in the price of government securities (fall in interest rate) will lead to readjustment in the portfolio of private individuals who will find that a smaller stock of government bonds than before[1] will yield the same net worth and, therefore, they will substitute money and private securities for government bonds leading to expansionary tendencies in the level of economic activity in general.

The 'Bills only' policy :

A closely related problem is about the method of conducting open market operations. Soon after abandonment of the pegged interest rate policy and consequent upon the Federal Reserve Accord in 1951 there emerged in the U.S.A. a viewpoint (authored by the officials of

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1. i.e. the demand for government bonds (measured by the number of bonds) would fall.

the Federal Reserve System) that the Central Bank may achieve the 'stabilization' purpose of open market operations by confining the transactions to only Treasury Bills ('Bills only' policy, therefore) and operating in the short end of the market. Since there would be no intervention in the long term market and, therefore, no destabilizing expectational effects the policy would ensure determination of long-term rate of interest by free market forces. Monetary policy will then steer clear of the charge of providing 'destabilizing effects' while at the same time achieving the stabilization purpose.[1] Such a policy was abandoned in 1961 and it suffered attacks on two grounds. The 'bills only' policy rested on the assumption that changes in the short end of the market are transmitted rapidly and completely to the intermediate and longer maturities and that by acting on these rates indirectly the policy helps improving the 'breadth, depth and resiliency' of the market. Dudley Lackett had shown that the empirical evidence did not indicate any improvement in the 'breadth, depth and resiliency' of the market since the time policy was adopted.[2] In the second place such a policy placed

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1. W. Reifler had argued that "the Central bank's choice of securities contributes only about one-eighth of the total effect of open market operations" so that choice was insignificant factor and bills had least of destabilizing effect; hence the justification for policy.

2. Quoted in H.G.Johnson "Essays in Monetary Economics" (1967) P. 62.

undue restriction on the power of the Central Bank to pursue a broad based and effective monetary policy. In a broader context the 'bills only' policy gave rise to debt management problems and was manifested in the issue regarding division of responsibility between the Central Bank and the Treasury; the timing and method of issuing long term bonds and so on. The Commission on Money and Credit[1] held the view that an adherance to the 'bills only' policy would necessitate making much larger changes in Federal Reserve holdings of bills to effect desired changes in long-term rates than it would be by direct operations in long-term securities.

OPEN MARKET OPERATIONS IN INDIA:

Earlier there were restrictions on the Reserve Bank of India in terms of ceiling on its holdings of securities as well as the maturity pattern of it but these having been removed now the Bank can freely engage in sale and purchase of securities without any restrictions on either quantity or maturity. The objects of open market operations in India have been (i) to assist the government in its borrowing programmes which may involve 'grooming' of the market, 'switch operations' as well as maintaining orderly conditions in the market and

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1. Report of the Commission on Money and Credit Prentice Hall (1961) P. 64.

(ii) to provide seasonal finance to commercial banks. Thus prior to 1951 the Bank followed a policy of net purchases with a view to continuing the cheap money policy and supporting security prices in line with many other countries. But after 1951 the policy followed has laid greater emphasis on net sales.[1] It would be more appropriate to say that net sales and purchases have been confined to 'switch operations' rather than operations designed to produce large quantitative effects.[2] In part, this was made necessary by the heavy borrowing programme of the government for the purpose of resource mobilization for the Five year Plans. Importance of open market operations as a measure for -

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1. Following figures about net purchases/sales for the period April 1947 to March 1963 give an idea about this:

	Period		Net Purchase(-)/Sales(+)		
I	April 1947 to March 1951.		Rs.	- 219	Crores
II	April 1951 to March 1956	1st Plan	Rs.	+ 55.2	"
III	April 1956 to March 1961	2nd Plan	Rs.	+ 82.8	"
IV	April 1961 to March 1963	3rd Plan 2 yrs.	Rs.	- 56.4	"

Source:- "Open market operations of the Reserve Bank of India" December 1964 P. 1499.

2. 'Switch operations' involve swap of one type (maturity) of security for another so that the effect may be more on the maturity pattern rather than quantitative effects in terms of 'reserve' and 'interest rate' effects.

restraining credit, in the sense of its use as an instrument for producing important macro-economic effects for stabilization purposes, is thus precluded by the fiscal bias it has to bear.

Open market policy, in particular before 1951, was governed fundamentally by the twin considerations mentioned earlier and there were no efforts to align it with general monetary policy. Two important policy changes affecting the course of open market operations during the period 1951-66 were made in November, 1951 and September, 1964. In November, 1951 alongwith the raising of the Bank Rate the Reserve Bank discontinued its earlier practice of purchasing securities from the banks in the busy season but agreed to make finance available at the discount window against lodgement of the securities with the Bank.[1] The basic idea was to make Central Bank finance costlier, but it was hoped that the new practice would keep the securities market in orderly conditions also. A commercial bank selling securities would lose the interest on it but would utilise the proceeds to create advances carrying a higher interest rate and would earn the differential. If it has to borrow at the Reserve Bank, the Bank Rate, if

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1. Referred to earlier in Chapter V.

higher than the yield on the securities would cut into its net earnings. At 3½% then, the Bank Rate was higher than the yield on government securities and hence this policy change, was a step in the right direction in that it helped to bring the banks closer to the monetary authorities and make them feel the pinch of monetary discipline.

Another policy change initiated in September, 1964 in the form of linking of Bank accommodation to the 'minimum net liquidity ratio', a monetary measure with a fiscal intent, sought to affect the portfolio behaviour of banks in a manner that would be more conducive to debt management policy and make the Bank Rate policy effective while having a captive market in government securities.[1]

With these two policy changes in the background we may study the open market policy in India in relation to the following:

(1) SEASONAL FINANCE:-

One of the purposes of the Reserve Bank's dealings in government securities has been to provide seasonal accommodation to the commercial and co-operative banks. The practice before November, 1951 had thus been one of sale (liquidation) of government securities by the banks in the busy season to meet with the seasonal cash drain and reinvestment of the return flow of funds in Governments

1. These points were stressed earlier in Chapter V.

during the slack season. So long as the banks had no more attractive source of investment in the slack season and were in the need to have a reasonable component of 'liquid assets' their reinvestment in Governments was consistent with rational behaviour. This practice should expectedly have led to a wider margin in variations in the holdings of government securities as between two seasons. To that extent the new policy change of November 15, 1951,[1] if it led to smaller variations would have served the purpose of maintaining orderly conditions in the securities market.

The two-fold purpose of the policy change namely to increase dependence of the banks on the Reserve Bank and maintain orderly conditions in the market may be said to have succeeded if borrowings from the Reserve Bank as proportion to total credit increased and yields in the government securities market remained free from fluctuations. (Such seasonal borrowings by commercial banks are to be seen during Christmas in the developed European countries also but the 'season' is quite long in India and, what is more, it is related to the structure of production). However in a growing economy deposit accrual would reduce the need for borrowing at the Central Bank. We must, therefore, look up the behaviour of banks in regard to liquidation of securities and expansion in bank credit during the busy seasons to judge how far the objectives were realised. Variations in prices of government securities are supposed to have remained within limits.

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1. Referred to earlier as the 'package type policy measure' in Chapter V.

TABLE 6(1)

Busy season trends in de-holding of government securities and credit expansion by scheduled commercial banks.

(Amount in Crores of Rupees)

Year	Variations in		Percentage ratio of (2) to (3)
	Investments	Bank Credit	
(1)	(2)	(3)	(4)
1950-51	- 66	+ 163	40.5
1951-52	- 20	+ 72	27.9
1952-53	- 15	+ 67	22.4
1953-54	- 17	+ 105	16.2
1954-55	- 5	+ 98	5.1
1955-56	- 37	+ 164	22.6
1956-57	- 27	+ 148	18.2
1957-58	+ 50	+ 89	Not considered.
1958-59	- 3	+ 181	1.6
1959-60	- 52	+ 189	27.5
1960-61	- 126	+ 198	63.6
1961-62	- 25	+ 204	12.3
1962-63	- 98	+ 203	48.3
1963-64	- 145	+ 376	38.6
1964-65	- 154	+ 407	38.0
1965-66	- 27	+ 310	9.0

Source: Currency and Finance Reports 1956-57 to 1965-66.

Table 6(1) shows that the percentage ratio of de-holding of Investments to increase in bank credit which was 40.5 in the busy season of 1950-51 was reduced to 9 in 1965-66. In the intervening years except 1957-58 there was net de-holding in each year and the ratios showed fluctuations in some years. Thus in 1960-61, perhaps owing to the restrictive effect of the variable reserve ratio policy the ratio remained - inordinately high at 63.6 per cent. Again due to the behaviour of banks towards disinvestment in order to circumvent the policy of 'graded lending rates' intensified in October, 1962 the ratio had risen to 48.3; 38.6 and 38 per cent in the years 1963-65 and was again low at 9 per cent in 1965-66.

On balance, it could be said that the new policy measure had rather kept under check the behaviour of banks to unload securities during the busy season. The Reserve Bank of India is then justified in contending that (in regard to open market operations) "there has been transformation of their initial role as a channel of seasonal finance to the banking system into a flexible instrument of public debt and monetary management".[1]

It must however be noted that under the Indian conditions de-holding of government securities with a

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1. Reserve Bank of India Bulletin (December, 1964) Pp. 1496-1504.

view to financing 'busy season' credit needs, will continue to remain a component of bank behaviour in future. What the monetary authorities have assured themselves of is that this behaviour does not unduly disturb the government securities market.[1]

(2) GROWTH OF PUBLIC DEBT AND CONSTITUENTS OF THE SECURITIES MARKET:-

Total internal debt on the Government of India comprising of Rupee loans, Treasury bills, small savings and other obligations rose from Rs. 2,474 crores in 1951 (end of March) to Rs. 8,166 crores in 1966 -

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1. In a study made in the Reserve Bank of India that just came to be noticed (Refer Reserve Bank of India Bulletin June, 1970 Pp.914-28 and P. 917) the percentage ratio of de-holding of Investments to bank credit during the busy (and slack also) season shows different values. These Reserve Bank study ratios relate only to the 'seasonal component' of busy and slack season variations. (Our table 6(1) thus provides a rather crude measure). It is observed in the study that "the ratio of busy season contraction in 'investments in government securities' to busy season expansion in bank credit which was around 35 per cent in 1952-53 (our 22.4 per cent) had risen to 66 per cent in 1967-68" (which would work out to 35.7 per cent on our measure)". What is more, it is claimed that "the seasonal fluctuations in investments in government securities, particularly after 1963-64 can be regarded as indicating greater flexibility achieved by banks in regard to their investment portfolio".

   This observation does not then accord with the claim cited earlier about "transformation (of the role of open market operations) as a channel of seasonal finance to the banking system into a flexible instrument of monetary management".

(end of March). Of these Rupee loans and Treasury Bills which constitute the marketable part of the debt remained within a range of 60 to 70 per cent. Unlike the developed countries, in India investments by scheduled banks in Treasury bills has remained at a very low level, a large part of it being absorbed by the Reserve Bank. The practice of the Reserve Bank is to retire the Treasury bills when its cash balances holdings of the Central Government improve beyond the conventional minimum of Rs. 50 crores. When this possibility is minimal, the bills are funded into long term debt so as to reduce the proportion of floating debt in the total debt. As noted earlier a large and growing public debt has been considered a 'source of strength' for monetary policy but under Indian conditions although growth of public debt has been high[1] (an average annual rate of 15 per cent

1. Ratio of public debt to GNP in selected countries 1960.

Country	National debt, 1960 (In millions of U.S. dollars).	Ratio of debt to GNP.
Brazil	4,911	19
Canada	17,679	49
France	24,679	40
Germany	611	1
India	13,159	35
Japan	2,551	7
Norway	1,293	29
United Kingdom	77,652	124
United States	2,86,471	57

Source : J.M. Buchanan, "The public Finances" Irwin (1965) P. 391.

during 1951-66) it has assumed peculiar characteristics and has not been a useful plank for pursuing effective monetary policy. Further, most of the dealings of the Bank under its open market policy are in Central Government securities. The major constituents of the government securities market in India outside the government and Reserve Bank holdings, are (i) the commercial and co-operative banks (ii) Insurance and (iii) Provident Funds. Transactions with other financial institutions and individuals are of a very low order.

(3) OWNERSHIP PATTERN AND MATURITY DISTRIBUTION :

A : Pattern of ownership of government securities:

The above composition of the market is reflected in the ownership distribution of Central and State government securities as given in Table 6(2).

The trend in ownership pattern over the period 1951-66 has been such that whereas the share of government has remained virtually constant (between) 8 and 9 percent), that of the Reserve Bank increased by about one third (from 22.7 to 30.8 percent), that of the banking system declined by about one fifth (from 26.2 to 21.6) while the share of 'Insurance' virtually doubled (from 7.5 to 13.9) and 'Provident Fund' claimed as large a share as Insurance. Since the latter three categories (banks, insurance and provident fund) are obliged to hold a stipulated part of their assets in government securities and this

TABLE 6 (2)

Ownership pattern of Central and State Government Securities.

(Amount in Crores of Rupees)

	Year ended March			
	1951	1956	1961	1966
(1) Governments	125.8 (8.4)	162.8 (8.9)	267.6 (9.6)	349.4 (8.9)
(2) Reserve Bank of India	339.9 (22.7)	268.85 (15.2)	707.1 (25.4)	1218.0 (30.8)
(3) Commercial and Co-operative Banks	391.6 (26.2)	438.46 (24,7)	601.1 (21.6)	854.8 (21.6)
(4) Insurance	112.7 (7.5)	167.88 (9.5)	386.0 (13.9)	550.4 (13.9)
(a) Life Insurance	-	-	357.0 (12.8)	524.7 (13.3)
(b) General Insurance Cos.	-	-	10.0 (0.4)	10.1 (0.3)
(c) Employees State Insurance.	-	-	19.0 (0.7)	15.6 (0.3)
(5) Provident funds	-	-	217.5 (7.8)	531.3 (13.4)
(6) Industrial Finance and - State Finance Corporations	-	-	4.8 (0.2)	3.9 (0.1)
(7) R.B.I. "held on account of others".	66.5 (4.4)	107.25 (6.0)	38.5 (1.4)	39.0 (1.0)
(8) Non-Residents	60.0 (4.0)	40.89 (2.3)	34.3 (1.2)	19.4 (0.5)
(9) Others (Residual) of which :	400.0 (26.7)	591.00 (33.3)	526.9 (18.9)	387.0 (9.8)
Individuals:			78.2 (2.8)	56.1 (1.4)

Figures in the bracket show percentage to total.

Source: Currency and Finance Reports 1967-68; 1968-69.

constituting about one half of the total debt, the market has been captivated to behave as the authorities desire them to do. The share of individuals was rather negligible at a level of 1.4% in 1965-66.

The implications of this ownership pattern from the point of view of public debt management are that a captive market responds well to the borrowing programme of the government, keeps down interest cost and except 'grooming' the market, the job of monetary authorities is comparatively rendered easier. It has been argued that this method of 'institutionalisation' of public debt policy adds to inflationary pressure whereas this policy should fundamentally aim at reducing liquidity in the economy. More importantly, it is argued that when a large part of government securities is being institutionally held it does not augment the flow of savings into the public sector which would happen when more of the debt is held by individuals. Further from the point of view of monetary policy more of the holding by individuals enhances the effectiveness of open market policy by widening its area of operations.

Table 6(3) gives a comparative idea about the pattern of ownership of public debt in India and U.S.A. during the years 1966 and 1967 respectively.

TABLE 6(3)

Ownership pattern of Public debt in India and the U.S.A.

(Amount in Crores of Rupees and in Billions of Dollars)

INDIA (Year : March end 1966)		U.S.A. Year : 1967	
Holder of Security	Percentage share to total.	Holder of Security	Percentage share to total.
1. Reserve Bank of India	30.8 %	1. Federal Reserve Banks.	15.0 %
2. Governments	8.9 %	2. Governments	7.0 %
3. Commercial and Co-operative Banks.	21.6 %	3. Commercial Banks	17.0 %
4. Insurance 13.9% Industrial Finance & State Finance corporations 0.1%	14.0 %	4. Other financial institutions & corporations.	7.0 %
5. Provident fund	13.4 %	5. U.S.Government Trust Funds.	23.0 %
6. Individuals	1.4 %	6. Individuals	22.0 %
7. Others	9.9 %	7. Miscellaneous	9.0 %

SOURCE : 1. "Currency and Finance Report"(1967-68) Statement - 66 (p. 106-07).

2. J.F.Due : "Government Finance Economics of the public sector" Irwin (1968) p.311.

The table provides some interesting information. The share of governments is more or less equal in both and so is the share of holders clubbed as 'miscellaneous' and 'others'. The combined share of commercial banks; other financial institutions and Provident Fund (for the U.S.A., U.S. government trust funds) is also equal (49% in India, 47% in U.S.A.). This is more or less 'institutional' holding. Inequality in percentage share arises in respect of the Central Banks and Individuals in both the countries. The Reserve Bank of India holds ("on own account") almost double what the Federal Reserve Banks hold (30.8 and 15% respectively) while the percentage share of Individuals in the U.S.A. is fifteen times that in India (22% and 1.4% respectively).[1]

Larger percentage holding of government securities by the Reserve Bank may denote the strength of the Bank in carrying out open market operations. This share as can be seen from Table 6(2) has increased from 22.7% in 1951 to 30.8% in 1966. A reasonable percentage share by the Central Bank is a necessary but not sufficient condition for the conduct of open market operations for "being a banker to government the Central Bank can command an infinitely elastic supply of securities."[2]

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1. Larger holding to the extent of 4.8% by Individuals and Central Banks (taken together) in U.S.A. than in India is made good by about 2% larger holding by 'institutions' and 2% by government in India.

2. "Open market operations in India", Reserve Bank of India Bulletin, December, 1964. Pp. 1496-1504.

Conceivably a Central Bank following a policy of net purchases continuously would happen to possess a larger percentage share progressively but the larger holding by the Reserve Bank has resulted rather from the massive programme of economic development, increasing the relative share of public sector over each Plan, the reliance placed on market borrowings as a source of Plan finance and the Reserve Bank playing an underwriter to the loan programme. The higher percentage share of the Reserve Bank has its reflection in the lower share of individuals restricting the scope of the market and adherence to the policy of creating a captive market. This issue of 'narrowness' of the market will be dealt with in a subsequent section.

B : MATURITY DISTRIBUTION OF INVESTMENT BY BANKS IN INDIA:

The maturity distribution of public debt has received attention from many angles such as interest cost, debt retirement etc., in the field of public finance; for monetary policy it has relevance from the point of view of state of liquidity, interest rate policy and stabilization policy in general. "With a given pattern of maturities a high proportion of government debt, would ordinarily signify greater liquidity than a high proportion of private debt".[1] And with government debt itself shorter the overall maturity

1. C.R.Whittlesay, "Lectures on monetary management" Vora & Co., Bombay (1960) P. 37-38.

greater the liquidity.[1]

The 'Bills only' policy disregarded the significance of the maturity pattern but the Federal Reserve System in co-operation with the Treasury during the years 1960 and 1961 made attempts to influence - "twist" - interest rate structure through operations in securities of varying maturities.[2] Such a policy would result in decreasing the supply of long term bonds with the public (so that the long term rate is kept low) and result in shortening the average maturity structure. The issue as to how far a change in the maturity structure exerts influences on liquidity and the interest rates structure has been a matter of controversy but the pertinent point is that maturity structure is now reckoned as a factor of importance in formulation of monetary policy (and debt management)[3].

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1. However, as Earl Rolph pointed out "a shift in the composition of an outstanding public debt of a given size that reduces its average maturity increases private expenditures and vice versa for increases in average maturity. Like any emperical generalisation (however), this proposition does not hold for all circumstances". ("Principles of debt management", American Economic Review, June 1957. Pp. 305-08.

2. The "twisting" policy consisted of pushing the short term rate (for balance of payments consideration) while exerting downward pressure on long term rates for domestic purposes.

3. (A) Interest rates on debt contracts of all maturities would generally move together. The 'twisted' movement which was hitherto considered a transitional phenomenon has been made a plank for policy formulation. For review and comments see Thomas R. Beard in "Readings in money, national income and stabilization policy" (Eds. Smith and Teigen) Pp. 416-428.

(B) Milton Friedman however, considers that the "bewildering maze of securities of different maturities and terms have been a source of monetary uncertainty and instability". See his "A programme for monetary stability" (New York, Fordham University Press - 1959). Pp. 60-65.

In India, the maturity pattern of the Government of India Rupee loans (excluding Treasury bills) has shown signs of the pattern tending to become a little more short dated and little less long dated (vide Table 6(4)). The maturity pattern of public debt as a whole is however, determined by a number of factors such as interest cost, variations in the demand from investors and it is not to our purchase to go into details as to why the pattern is what it is. It may, however, be noted that from among the buyers of government securities, the demand from Insurance, Provident Fund and other non-bank institutions is one for 'keeps' and their investment portfolio would, therefore, necessarily show predominance of long term securities. Commercial and co-operative banks, as we saw earlier (Table 6(2)) had their share of ownership fluctuating from about 1/5th to 1/4 of the marketable securities. Table 6(5) shows trends in the maturity pattern of investments in government securities by the scheduled banks over the period 1951 to 1966. The maturity pattern of investments by banks is affected by various factors such as (i) debt policy with respect to the maturity structure (ii) open market operations by the Central Bank including 'switch' and 'grooming' operations (iii) need for liquidity (iv) pattern of yields on various maturities (v) substitutability between cash and very short securities like Treasury bills and so on.

Table 6(5) shows that there has been a general trend of expansion (in absolute amount) in the investment -

TABLE 6(4)

Maturity pattern of Government of India Rupee Loans.

(Amount in Crores of Rupees)

End of March	Total Out-standing	Un-dated.	Percent-age to total	Under 5 years	Percent-age to total	Between 5 & 10 years.	Percent-age to total	Over 10 years	Percent-age to total.
1951	1438.[illegible]6	257.[illegible]5	[illegible]7.9	318.77	22.2	342.51	23.8	519.33	36.1
1952	1403.51			232.05	16.5	450.14	32.1	463.47	33.0
1953	1403.58			346.46	24.7	411.67	29.3	387.00	27.6
1954	1364.27			288.06	21.1	546.93	40.1	271.43	19.9
1955	1474.39			353.70	24.0	621.70	42.2	241.14	16.4
1956	1508.67			393.13	26.1	616.52	40.9	241.17	16.0
1957	1633.61			464.10	28.4	665.43	40.7	245.83	15.0
1958	1699.50			557.35	32.8	625.22	36.8	259.08	15.2
1959	2180.96			719.87	33.0	596.84	27.4	606.41	27.8
1960	2433.23			810.53	33.2	662.38	27.2	707.48	29.0
1961	2571.33			866.62	33.7	756.41	29.4	690.45	26.9
1962	2688.45	257.84	9.6	925.21	34.4	698.96	26.0	806.43	30.0
1963	2840.94			1001.91	35.3	711.51	25.0	869.67	30.6
1964	3113.92			1052.34	33.8	1245.28	40.0	558.45	17.9
1965	3267.53			1236.14	38.4	1127.71	34.5	625.84	19.2
1966	3424.92	257.84	7.5	1386.03	40.5	1015.77	29.7	765.28	22.3

NOTE:- Considering that the maturity structure consists of three categories (excepting the 'Undateds') we may see the number of years for which each category had a percentage share of 30 and above (assigning 10 per cent to the category of 'Undateds'). Then we find the following results:

Category	1951-56 period	1957-66 period
1. Over 10 years	2	2
2. Between 5 and 10 years	4	4
3. Under 5 years	-	9

From the above we could say that the maturity pattern has been a little more short dated.

Source:- "Currency and Finance Reports" - Various years.

portfolio of banks. The share of investment in"governments" to total investment has, on an average hovered around the level between 86 and 87 per cent of their total investments during the period 1951 to 1961 (Col. 2). But the share began to decline till 1965 when it was 80.7 per cent. This was accounted for largely by an increase in investment in 'other trustee securities' due to "higher yield on them as compared to government securities while they are treated on par with the latter for purposes of borrowings from the Reserve Bank and for compliance with the liquidity requirements."[1]

The maturity pattern shows that the share of Treasury Bills (Col.3) has virtually remained insignificant in the total portfolio. This in itself puts a limitation on vigorous use of open market operationsand is the cause for the banks maintaining a higher cash balances ratio. There is no discernible trend about the behaviour of banks in regard to their holdings of Treasury Bills but as pointed out by the Bank "scheduled banks enlarge them during the slack season and allow them to run out during the busy season."[2] A reference was made in Chapter five about the behaviour of banks to hold on more of treasury bills to

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1. "Trend and Progress of banking in India" (1964) P. 15.

2. One may conceivably speak of relationship between treasury bills, 'money at call and short notice' and commercial bills in the ascending order of profitability. 'Yields' on them would determine their optimum holding subject to the liquidity requirement constraint. No systematic relationship could be worked out because the order of magnitudes involved is small. However, a reference to their structural relation is made in Chapter eight.

TABLE 6(5)

Trends in maturity distribution of investments by scheduled banks in India 1951 (end December) to 1966 (end March).

(Amount in Crores of Rupees)

Year	Investment in Government Securities	Percentage to total Investments including other domestic Investments	Maturity pattern (percentage to Investment in Col. 1)				
			Treasury Bills.	Security maturing			
				within 5 years.	Between 5 & 10 years	Between 10 & 15 years	After 15 years
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
1951 (Dec.)	305.83	85.4	0.7	25.9	47.3	15.3	10.8
1952 "	32[illegible].02	86.1	5.3	33.5	42.9	8.5	9.8
1953 "	333.74	86.4	2.8	31.6	49.7	15.1	3.8
1954 "	357.53	86.4	1.9	24.1	58.6	11.5	3.9
1955 "	396.09	87.3	2.9	21.0	60.5	11.7	3.9
1956 "	377.77	85.4	-	37.3	40.5	17.6	4.6
1957 "	447.31	86.7	-	52.9	31.4	11.4	4.3
1958 "	663.55	88.1	8.4	40.8	38.8	8.4	3.6
1959 "	783.16	87.7	9.1	35.1	40.2	11.2	4.4
1960 (March)	737.86	94.4	6.7	35.0	42.1	11.7	4.5
1961 "	580.41	86.0	4.8	44.3	36.8	10.8	3.3
1962 "	624.62	85.6	11.4	36.7	38.8	10.0	3.1
1963 "	526.97	83.4	5.9	38.1	44.5	8.2	3.3
1964 "	669.14	80.9	2.9	42.2	45.5	6.1	3.3
1965 "	755.12	80.7	0.7	56.6	33.8	5.7	3.2
1966 "	820.27	81.5	2.4	67.5	21.0	6.3	2.8

Source: "Trend and progress of Banking in India" : Various years.

Note: There was a change in the method of reporting maturity distribution in 1960 from the December-end period to March-end period. Hence the rather larger percentage (94.4) in Col. 2 against the three month period between December end 1959 to March end, 1960.

take better advantage of borrowing under the graded lending rates. The maturity pattern of Table 6(5) partly reflects this. There was larger holding during the years 1958 to 1963.

In regard to the four other maturities (columns 4 to 7; Table 6(5)) it is seen that the banks have gradually and in a trend manner moved out of the 'after 15 years' maturity from its percentage level of 10.8 in 1951 to 2.8 in 1966.

In a similar manner, the share of the 'between 10 and 15 years' maturity was at or below 11 percent for twelve out of the fifteen year period and for three years it was at or above 15 percent. Columns 6 and 7 thus establish a clear trend of decline of the long-dated securities in the portfolio, this decline having been matched by an increase in the share of the 'short' and 'medium' maturities (Columns 4 and 5). Both in absolute amounts and percentage share the investments are concentrated in these two categories. Even within these two, the relative share of the 'shorts' has increased over that of the 'mediums' by a higher percentage after 1956 as is evident from Table 6(6). This leads us to say that there has been average shortening of the maturity structure of investments by banks. The relative shifts in the two categories which have caused 'shortening' of the structure could be seen in Table 6(6). Excepting the two years 1954 and 1955 the ratio of 'within 5 years' to 'between 5 and 10 years' has remained above 50 per cent and above 100 per cent for five years. Banks have progressively remained more 'liquid' over these years.

TABLE 6(6)

Ratio of absolute amount of Investments by scheduled banks in the 'short' and 'medium' maturities 1951-66.

(Amount in Crores of Rupees)

Year ended		Securities maturing Within 5 years (1)	Between 5 & 10 years (2)	Ratio of (1) to (2) (3)
December	1951	79.12	144.73	54.8 %
	1952	109.14	140.29	77.8 %
	1953	102.48	161.69	63.3 %
	1954	85.95	209.55	41.0 %
	1955	83.95	239.59	35.0 %
	1956	140.77	153.16	91.5 %
	1957	236.77	140.64	168.5 %
	1958	270.86	257.29	105.0 %
	1959	274.68	315.09	86.9 %
March	1960	258.67	310.50	83.2 %
	1961	256.78	213.53	117.4 %
	1962	229.06	242.39	94.6 %
	1963	239.22	279.13	85.7 %
	1964	282.72	304.58	92.7 %
	1965	426.90	255.50	167.0 %
	1966	552.57	172.59	320.9 %

Note :- Investment in Treasury Bills has been excluded.

Source :- "Trend and progress of banking in India" f o r relevant years.

Both in terms of absolute amount and percentage share, investments in the 'medium' (medium - long) maturity remained in excess of the 'short' (short - medium) maturity for all the years till 1956 whereafter there were shifts between the two categories till 1962. The two year period between 1962 and 1964 which was one for adjustment of banks' portfolios to meet with enhanced liquidity ratio effective from September 1964, again experienced some shift though the 'shorts' were definitely gaining in absolute amount. But from 1964 onward till 1966[1] there has been a clear tendency towards larger concentration in the 'shorts'. On balance during the period 1951-66, there has been a definite tendency towards 'mediums' and more recently towards 'shorts' and away from 'longs'.

The Indian Banks' Association suggested that the change in maturity pattern was related to the debt policy of the government with respect to maturity structure of its issues (vide Table 6(4)).[2]

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1. During the year ended March, 1967 the position was as under :

Within 5 years. (1)	Between 5 & 10 years. (2)	Ratio of (1) to (2)
Rs.534.28 crores	Rs.287.81 crores.	186%

2. "In the 'fifties the Government floated long-dated loans at low rates. As the banks had a restricted choice they invested in long-dated securities. (With the)beginning of the Second Plan, the Government started issuing more than one loan for varying periods. This has facilitated a switch from long-dated to short and medium-dated securities." Quoted in Donald Hester, "Indian Banks, their portfolio, profits and policy", University of Bombay, (1963) P. 34.

One of the aims of banks in putting their funds into 'Governments' is to withstand fluctuations in deposits and this consideration would induce them to have more of the 'shorts' in their portfolio.

In his study on portfolio behaviour of Indian banks, Hester[1] stated that 'the average maturity of American Bank portfolio is five years' whereas it was longer in India partly due to lack of a broad bill market and partly due to statutory obligations. He thus concluded that "when banks are required to hold a high percentage of bonds, there is some incentive to maximise income by picking high yield bonds". Further in view of the fact that "Indian yield curves are upward sloping" he came to the judgement that "maturity of bank-held debt should increase as a result of increased liquidity requirements".[2]

However, the maturity distribution since 1962 has been one of shortening as we saw earlier. Investments by banks in the 'within 5 years' maturity increased over the period 1962-66 by Rs. 323.51 crores while both the '5-10' and '10-15' years maturities showed decline of Rs. 69.80 and 10.58 crores respectively. The 'after 15 years' category showed a marginal increase of Rs. 3.64 crores (vide Table 6(7)). These figures thus do not validate Hester's conclusion. Variations in investment in Treasury bill clearly reflect their use for 'seasonal' purposes as

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1. Hester cited above.

2. D. Hester Ibid P. 34-35 (as it was written in 1962 then).

TABLE - 6(7)

Annual variation in maturity-wise investments by scheduled banks during 1962-66.

(Amount in Crores of Rupees)

Year ended March	Maturity distribution									
	Securities maturing within									
	Treasury Bills		5 years		5-10 years		10-15 years		After 15 years	
	Amount	Variation over previous year	Amount	Variation over previous year.	Amount	Variation over previous year	Amount	Variation over previous year	Amount	Variation over previous year
1962	71.19	-	229.06	-	242.39	-	62.25	-	19.73	-
1963	36.09	- 35.10	239.13	+ 10.07	279.13	+ 36.74	51.23	- 11.02	20.70	+ 0.97
1964	19.37	- 16.72	282.72	+ 43.59	304.58	+ 25.45	40.96	- 10.27	21.51	+ 0.81
1965	5.31	- 14.06	426.90	+144.18	255.50	- 49.08	43.31	+ 2.35	24.10	+ 2.59
1966	20.09	+ 14.78	552.57	+125.67	172.59	- 82.91	51.67	+ 8.36	23.35	- 0.75
Total Variation during 1962-66.		- 51.10		+323.51		- 69.80		- 10.58		+ 3.62

Source: "Trend and Progress of banking in India" for respective years.

emphasised by the Reserve Bank.

Higher yields on the 'longs' serve as a cushion for the possible capital loss but there is a general presumption that in India the differential in yields on the shorts and the longs is not great enough to absorb this capital loss and hence the preference for the shorts. A conclusion may then be hazarded - though such a conclusion would need deeper analysis - that if the maturity distribution of bank investments is tilted towards the 'shorts' and the spread between the yields on longs and shorts is not wide, it might put the monetary authorities in a comfortable position in pursuing an active interest rate policy.

(4) NARROWNESS OF THE SECURITY MARKET IN INDIA:

In an important study of the 'open market policy' of the State Bank of Pakistan, R.C. Porter came to the conclusion that the Bank's policy had diluted effectiveness of the measure by 'narrowing' the sphere of the securities market in Pakistan.[1] In a narrow market (i) absolute number of buyers and sellers is small (ii) position takers are lacking and (iii) there is not a wide spectrum of owners and ownership motives. The first condition

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1. R.C. Porter "Narrow security markets and lessons from Pakistan" - Economic Development and Cultural Change - October, 1965 - Pp. 48-60.

inheres in the nature of an underdeveloped economy but the other two are not inevitable. Porter contended that by a policy of 'coercive placement' of securities with commercial banks[1] through enforcement of liquidity requirements and a method of assigning 'quotas' to the banks with each new floatation, the Central Bank in Pakistan had destroyed the other two conditions also. The consequences were that on the one hand, it assisted issuance of loans at low rates of interest by the government but on the other hand it deprived the Bank of the use of the two control measures, open market operations and reserve requirements'. Again the very reasons that led to coercive placement of public debt with commercial banks also deterred the use of frequent variations in Bank Rate[2]. "Hence," Porter concluded, "only selective credit controls have been in use with the State Bank (of Pakistan) which relate more to the structure of credit than its volume". In order to render monetary policy more effective, Porter suggested raising yields on government bonds so that the ratio of non-bank held debt (which in June, 1962 was just 20% of the debt held outside the Central Bank), could increase.

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1. In India, the share of commercial banks in the debt held outside the Central Bank was 28 percent (in March, 1961) as against 80 percent held by banks in Pakistan(in June, 1962) vide Table 6(2) above and Porter op.cit.

2. The Bank Rate which was 3% at the end of 1948 was raised to 4% in January 1959 and 5% in June, 1965.

The Indian situation has resemblance to the policy followed in Pakistan though there are important differences. Although the Reserve Bank of India does not suggest quotas for banks, the statutorily determined liquidity requirements are there. The basic question to be asked, therefore, is: How far is it helpful for the policy makers to operate in such a captive market and whether it is inevitable to do so.

A captive market would be said to exist when the institutions holding the securities would hold less of them if legal restrictions are not imposed, the primary reason being low and unattractive yield on the gilt-edged. An optimum portfolio selection would include a given percentage of assets in the form of 'investments'. Banks have for a long time followed 'rules of thumb' in arriving at their level of 'investment' component in the total assets structure. British banks considered that in their 'risk assets' component (which would constitute 65 - 70 % of the total assets structure) they would ideally desire to have 25-30 per cent investments and 40-45 per cent of advances. In 1958 (December) London clearing banks were holding 27.7% of their assets in 'Gilt edged securities' (vide Radcliffe Committee Report - P.45 - Table 8). Commercial banks in U.S.A. where there are no secondary reserve requirements also are found to hold nothing less than 25 per cent of their assets in the form of 'governments'.

In India, the ratio of investment in government securities to total deposits declined from 36% in 1951-52 to 27.5 per cent in 1965-66. The five year average which was 36.2% at the end of First Plan, came down to 33.4% and 28.7% respectively at the end of the Second and Third Plans respectively (vide Table 6(8)).

TABLE 6(8).

Ratio of investments in government securities to total deposits of scheduled banks during 1951-52 to 1965-66.

(Amount in Crores of Rupees)

Year (as at the close of last Friday)	Aggregate deposits (1)	Investments* in Government securities.(2)	Ratio of (2) to (1) Percentage (3)
1951-52	822	296	36.00
1952-53	830	303	36.5
1953-54	847	319	37.6
1954-55	942	344	36.5
1955-56	1043	360	34.5
Average ratio for the five year period			36.2
1956-57	1176	347	29.5
1957-58	1452	440	30.4
1958-59	1635	613	37.5
1959-60	1902	715	37.6
1960-61	1746	559	32.0
Average ratio for the five year period			33.4
1961-62	1917	601	31.4
1962-63	2042	593	29.1
1963-64	2285	640	28.0
1964-65	2583	718	27.8
1965-66	2950	811	27.5
Average ratio for the five year period			28.7

*includes treasury bills.

Source:- "Currency and Finance Reports".

Investment by banks in the gilt-edged remained well in excess of the statutory minimum of 20% till 1955-56 for the possible reasons such as lack of opportunities for larger credit expansion to the private sector; cognizance on the part of banks of the need for sound banking under conditions of enhanced powers of the Reserve Bank but seemingly for the more important reason that the differential between the 'return' on advances and 'investments' remained narrow till 1959-60 and has widened after that.

Table 6(9) shows that the differential in 'return' on advances and investments in respect of the scheduled banks for the years 1953 to 1966 fluctuated between 2.4 to 3.6 during the period 1953 to 1962;from 1963 to 1966 the differential has steadily increased from 3.9 in 1963 to 5.1 in 1966. Under optimising behaviour in their portfolio holdings, the banks seem to have been guided by this differential and switch from 'governments' to Advances over the past few years.[1] The relatively lower return on governments could be ascribed to (i) the change in maturity structure of bank investments and (ii) the interest rate structure of government securities. Since the differential in the long dated and the short-dated is not wide

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1. It may be noted that the average yields on securities and loans with Ordinary banks in Japan (March-September 1961) were 7.293 and 7.813 per cent respectively, implying a differential of only 0.52 per cent. It may further be noted that with this small differential the holdings of negotiable government debt by banks in Japan was 18 per cent of the total debt as on March 31, 1961.

   Refer H. T. Patrick 'Monetary Policy and Central Banking in Contemporary Japan'. University of Bombay (1962) P. 134 and 97.

TABLE 6(9)

Relative Rates of Return of Investments and Advances by scheduled banks - 1953 to 1966.

(Amount in Crores of Rupees)

Year (Average of Friday figures).	Investment (Government securities).	Earnings on Investment.	Percentage ratio of (2) to (1)	Advances: Loans + Bills discounted.	Earnings on advances	Percentage ratio of (5) to (4)	Difference between (6) & (3) (6) - (3)
	1	2	3	4	5	6	7
1953	318.02	8.73	2.7	491.40	29.28	5.9	+ 3.2
1954	339.31	9.27	2.7	552.23	31.18	5.6	2.9
1955	365.19	10.26	2.8	603.86	33.37	5.5	2.7
1956	363.98	10.57	2.9	744.04	39.92	5.3	2.4
1957	364.82	10.67	2.9	873.74	52.10	5.9	3.0
1958	517.73	13.79	2.6	892.70	55.60	6.2	3.6
1959	690.24	20.03	2.9	961.89	58.65	6.1	3.2
1960	729.65	21.46	2.8	1107.07	67.15	6.1	3.3
1961	584.88	17.55	2.9	1253.20	81.39	6.5	3.6
1962	630.44	20.24	3.2	1389.77	94.34	6.8	3.6
1963	679.44	21.92	3.2	1516.62	107.76	7.1	3.9
1964	713.94	25.90	3.6	1756.70	129.37	7.4	3.8
1965	797.27	28.78	3.6	2063.32	172.30	8.3	4.7
1966	934.76	36.94	3.9	2265.91	205.67	9.0	5.1

Source: "Statistical tables relating to Banks in India" for the years 1957, 1962, 1966.

enough to compensate possible loss in capital values on the long dated (in the event of a rise in interest rate) the banks have 'shortened' their investment pattern while although the Reserve Bank has followed a policy of regulating rates on advances this has not helped either maintain or avert the fall in the ratio of investments to total deposits. A question may be asked as to whether with the given structure of 'returns' on investments and advances the banks would have maintained the level of investments they did in the absence of statutory liquidity requirements. Conceivably, there is a floor level of investments the banks would be willing to maintain irrespective of the 'relative' rates of return on the two types of assets. The ideal level, based on rule of thumb as desired by the British banks was 20% as we noted earlier. British Banks had the ratio of investments to deposits at 15.4% in 1963.[1] Banks in the U.S.A. seem to maintain under normal conditions a ratio of 25 to 30 percent in 'Governments'. Both the British and U.S. banks have to maintain a much higher minimum ratio of cash[2] than their counterparts in India. The statutorily determined liquidity ratio (28 percent as from September, 1964) thus

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1. W. Manning Dacey, "The British banking mechanism" London (1964) P. 90.

2. Legal minimum cash ratio for the U.S. banks works out between 15 to 18 percent while for the British banks the minimum is 8 percent as against 3 percent in India.

may not be considered high for the banks in India and we may not be justified in saying that the market has remained narrow due to deliberate government policy. If we further take into account borrowings by the scheduled banks from the Reserve Bank, the restriction on bank portfolio behaviour in form of secondary reserve requirements does not appear that much harsh. Table 6 (10) shows that the borrowings by scheduled banks (as percentage to their total deposits) was above 5 per cent for five years; between 3 and 5 per cent for six years and below 3 per cent for four years during the period of the three plans.

Compared to the behaviour for borrowing by the commercial banks in Pakistan in lieu of their enforced holdings of government securities as revealed in Porter's study, the behaviour of commercial banks in India has remained moderate and within limits. Further in India the innovation of minimum net liquidity ratio as the basis for borrowing from the Reserve Bank compensates for the loss of monetary control that may come about due to a captive market - and this was Porter's major concern in regard to his study for Pakistan.

Porter recommended a rise in yields on government securities so that the Bank may find more non-bank investors, reduce the degree of coercive placement and enhance effectiveness of monetary control. Higher

TABLE 6(10)

Ratio of borrowings by scheduled banks from the Reserve Bank to total bank deposits.

(Amount in Crores of Rupees)

Year Last Friday of March.	Total deposits	Borrowings	Ratio of (2) to (1) percentage
	1	2	3
1951-52	822	54	6.8
1952-53	830	19	2.3
1953-54	847	31	3.7
1954-55	942	37	3.9
1955-56	1043	65	6.2
1956-57	1176	103	8.7
1957-58	1452	42	2.9
1958-59	1635	62	3.8
1959-60	1902	79	4.1
1960-61	1746	95	5.4
1961-62	1917	53	2.8
1962-63	2042	71	3.5
1963-64	2285	84	3.7
1964-65	2583	153	5.9
1965-66	2950	74	2.5

Source: "Currency and Finance Reports" : Various years.

interest rates would mean larger burden on the exchequer but Porter felt that on one hand the burden will not be as large as may be believed and more importantly on the other hand "against increased interest cost must be set the gain in potency of monetary policy".[1]

M. Narsimham[2] raises the pertinent point that Porter's advocacy for higher interest rates rested on the assumption of high interest elasticity of demand for the gilt-edged on the part of the non-bank public "and even from the banks once their holdings have met the legal minima." This hypothesis however, remains untested in the context of a developing economy. The more basic point according to him, therefore, is the objective of the authorities "to build up the market". Consistent with this objective, monetary authorities could resort to variations in liquidity ratio in substitution of the comparatively inflexible cash reserve ratios (as has been the practice in India).

Narrowness of the securities market in this fundamental sense may not prove so great a limitation as might be supposed. The issue relates broadly to the development of the financial system, and the

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1. R. C. Porter Ibid P. 56.

2. M. Narsimham "Narrow security markets and lessons from Pakistan - A Comment "Economic Development and cultural change, July, 1967. Pp. 469-71.

variety of financial instruments as may be conducive to the process of economic growth. It may be of interest to note here the observation made in regard to the nature of securities markets in developed countries. "In countries like England, open market operations are impossible not because the securities market are too bad (thin) but because they are too good and the Bank's first duty is to keep them that way. "Limitless marketability of government debt is itself an obstacle". Such a view however, is not tenable since "where investors want to provide for liquidity at short notice they will not hold bonds, however, marketable, and for smaller transactions some market in gilt-edged securities can always be made without the Bank's participation"[1]

It may then be seen that to the extent there is holding to maturity by a group of investors under statutory obligations, to the extent there is shortening of the maturity pattern so that the fear of capital loss remains lower than if the maturity pattern was 'longer', to the extent there is some operation of locking-in effect, monetary authorities need not get scarred in pursuing a realistic interest rate policy for fear of disrupting the securities market. It may also be pointed out that under Indian conditions the 'small savings securities' though not marketable are fairly liquid.

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1. P.M.Oppenheimer "The Managed economy" Basil Blackwell (1970) Pp. 76-92.

The upshot of the argument is that effectiveness of monetary policy in underdeveloped countries need not necessarily diminish due to 'narrow' securities markets and that the long term objective of "building up the market" could remain consistent with the goal of monetary control and pursuance of an active interest rate policy.

Concluding remarks :

Open market operations are a versatile instrument of monetary control suitable for 'fine tuning'. Central banks in underdeveloped countries which have the responsibility for 'building up the securities market' cannot tune them for finer day-to-day adjustments. In India, they have remained more of the nature of 'switches' rather than quantitatively important sales and purchases. Their use as a channel of seasonal finance continues to remain but has been kept within bounds so that unsettling effects on securities markets are avoided. There has been a 'shortening' in the maturity pattern of investments by scheduled banks and concentration in the 'within 5 years' maturities.

The ratio of 'investments' to total deposits has declined from 36.0 per cent in 1951-52 to 27.5 in 1965-66. Looking to the low cash ratios that scheduled banks in India have to maintain as compared with those to be maintained by banks in the U.K. and U.S.A.

scheduled banks in India seem to employ relatively smaller proportion of their funds in investments. One of the reasons for this is to be found in the progressive widening of the spread between returns on investments and advances (from +3.2 in 1950-51 to +5.1 in 1965.66) [Vide Table 6(9)]

In contrast to the narrowness of securities markets in the underdeveloped countries may be cited the contention that in the developed countries 'limitless marketability' renders the market too goods The truth is that in the case of both the groups of countries there is holding to maturity and there are marketable assets which may provide liquidity without participation by the Central Bank so that pursuance of an active interest rate policy does not seem that much destabilizing as may be supposed.

We may now turn our attention to another 'General' measure of monetary control.

II. VARIABLE RESERVE REQUIREMENTS:

The technique :

Controlling money supply through variations in reserve requirements has been generally termed as swift blunt and discontinuous measure. Its basis

may be legal or conventional[1] but it is readily enforceable when given a legal status. It has become a variegated instrument of control in the post-war years and Tamagna[2] distinguishes three types of it as 'fixed solvency ratio'; 'liquidity ratio' and 'flexible reserve requirements' i.e. 'cash reserve ratio'. 'Fixed solvency ratio' is akin to the ratio of capital and reserves to deposit liabilities. The conventional 'ratio consciousness' among the British banks was somewhat of the nature of a self - imposed solvency ratio. One may say that when the minimum cash reserve ratio is set at a level (3% in India) and when variation in the downward direction is the least possible it takes on the character of a solvency ratio.[3] All the three ratios may exist together but the general pattern is that of fixing a cash reserve ratio (primary reserve ratio) and liquidity ratio (secondary reserve ratio). The tradition with the British banks of segregating their assets into 'liquid assets' (keeping them at 30% of total deposits) and 'risk assets' provides an early illustration of the coexistence of both the ratios

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1. In the U.K. it had for a long time remained a conventional measure. In the post-war years some countries have enforced it in the form of 'gentleman's agreements' (e.g. Netherlands; Switzerland) but the general tendency is to legalise the measure.
2. Tamagna op.cit.
3. This argument would not apply to countries where no minimum legal ratio is prescribed (e.g.Japan).Refer H.T. Patrick (op.cit) P.111.

although monetary authorities there did not operate on them for control purposes.

Modus operandi of Reserve Ratios:

The mechanism whereby variations in cash reserve ratios affect credit creating capacity of banks and thereby money supply is quite simple.[1] It has also been the generalc contention of bankers that a policy of raising the ratio affects them in a discriminatory way and to the extent legal holding of reserves remain non-interest bearing and reduce bank earnings they abhor stricter and frequent use of this instrument by the monetary authorities.

On the theoretical plane, use of reserve requirements as a measure of monetary control has received extensive treatment in recent years.[2] Three important issues emerging from it has been (i) relative efficacy of reserve requirements and open market operations for cyclical stability (ii) optimum level of reserve

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1. Variations in reserve requirements alter the amount of excess reserves and affect the credit expansion multiplier. Low (high) reserve requirements carry a high (low) value of the credit expansion multiplier.

2. For a highly penetrating analysis covering diverse aspects, refer W.L. Smith 'Reserve requirements in the Americal Monetary System" in "Monetary Management" - C.M.C. study publication Pp. 175-315.

requirements and (iii) primary and secondary reserve requirements.

(1) Relative efficacy of reserve requirements:

J. Aschheim had earlier argued that since variations in reserve requirements produce procyclical results while open market operations produce the desired (stabilizing) effects, the former method may be done away with and used only in emergency cases of excess liquidity such as due to a heavy inflow of gold or in underdeveloped countries where securities holdings of the Central Bank would not be large enough to enable it to undertake open market operations.[1] W.L. Smith has however posed the issue in a more rational and forthright manner stating that "under most circumstances the effects of (for example) expanding credit by lowering reserve requirements will almost surely be different in detail from those produced by the same amount of expansion (measured in terms of the increase in income generating expenditures) produced by open market purchases. That is, the spending units which will be induced to increase their expenditure will be different in the two cases as will the types of expenditures affected. Unfortunately, however, our knowledge of relative 'incidence' of the two weapons is very poor, so that, while we may be sure that there are

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1. For an elaborate presentation refer his 'Techniques of monetary Control' Baltimore (1961) Ch. 2. Aschheim emphasising the profit maximising behaviour of the banks had argued that under restrictive policy when - reserve ratios are raised banks would unload securities in the market and substitute private loans for investments, the former action would destabilze the securities markets while the latter would produce procyclical results. The former effect may then compel the Central Bank to undertake auxiliary open market operations to keep the securities market in order.

differences there is very little that can be said about them".[1] On the other hand it could be argued in support of reserve requirements that (i) they do not cause any disturbances in the security market as do the open market operations and, therefore, meet the test of 'neutrality' of an economic policy measure, (ii) they produce powerful announcement effects and (iii) are useful for meeting national emergencies. Smith however, clinches the issue when he states that "in view of the super administrative efficiency of the open market operations together with the unpopularity among banks of frequent two-way adjustments of reserve requirements, there is much to be said for relying exclusively on open market operations under normal circumstances".[2] While the general opinion veers to the view for using reserve requirements as an auxiliary instrument with open market operations on occasions, for the developed countries, it is suggested that underdeveloped countries would have to rely in a large measure on reserve requirements firstly in view of the underdevelopment of the securities market and secondly due to the swiftness with which this measure would help contain inflationary pressures. As we saw earlier 'thinness' of securities market as a limitation on monetary policy is rather exaggerated. Further even if we grant the efficacy of reserve requirements as an

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1. W,L. Smith "The instruments of general monetary control" in "Readings in money, national income and stabilization policy" (op.cit). P. 233.

2. W.L. Smith Ibid P. 236.

anti-inflationary measure we have to steer clear of the charge that this measure produces inequitious effects on the banking system. A way out suggested is to impose marginal reserve requirements (as done in India in 1960) but as Lindbeck well points out "a problem with this method, however, is that it hits fast growing and new banks particularly hard".[1] It could be argued in general that "a bank's reserve percentage serves as an anchor for current and forward management decisions. Abrupt changes in the weight of this anchor can have an upsetting influence in the portfolio programmes of individual, particularly small, banks". A new-fangled approach to the use of reserve requirements has been suggested by N.H. Jacoby wherein a plea for rationalisation of the instrument has been made on the ground that "the legal reserve requirement of an individual bank should be proportional to the contribution of its depositors to the aggregate demand for the total national product".[2] To ensure this, it would be necessary to relate reserve requirements to the proportion of expenditures made by the depositors of a bank to final product. A measure of the proportion is provided by the annual income velocity or turnover of its deposit balances (calculated by the formula: Annual debits to Deposit Account/Average Deposit balances). Obviously a bank with a larger

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1. A Lindbeck - "A study in monetary analysis (1963) P.262.
2. N.H. Jacoby "The structure and use of variable bank reserve requirements" in Dean Carson (Ed). "Banking and monetary studies" (1963).

Deposit Velocity would be subjected to higher reserve requirements. This would of necessity, remove the element of 'inequity' inherent in the traditional reserve requirements method. But precisely for this reason, the administrative problem would be difficult to tackle and that is why the proposal has not received wider recognition from the profession.

2. Optimum level of reserve requirements :

Discussion regarding optimum level of reserve requirements has, among other things, centred round the problem of the usefulness of low reserve requirements in increasing the leverage of monetary policy. If the currency ratio of the public is low (implying widespread banking habits)[1] the reserve money multiplier will remain high and hence the leverage of monetary policy will be determined by the ratio ;

$$\frac{1}{n+r(1-n)}$$

where n is ratio in which people choose to keep their money supply in form of currency and r is cash reserve ratio with banks. If the ratio n is constant then the leverage effect is determined by $\frac{1}{r}$ and hence lower reserve requirements would enhance the effectiveness of

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1. A rise in the currency-deposit ratio would thus denote lower growth in banking. During 1930s in the U.S.A. when the currency-deposit ratio was rising due to distrust in banking the Federal Reserve Banks could thwart it by expansion of high powered money. However, as we saw in chapter two, determinants of this ratio are thus not explained in an analytically meaningful manner.

monetary policy. Again when one is concerned with the problem of providing growth in money supply lowering reserve requirements would be equivalent to purchasing securities under open market operations.[1] Those economists who insist on a 100 per cent reserve system and thus deny themselves the use of lowering reserve requirements have, therefore, some special issues to tackle in regard to sale and purchase of securities for providing growth in money supply.

3. Primary and Secondary requirements :

An important issue that arose in the post-war years was the linking of primary (cash) reserve requirements with secondary (liquid assets) requirements. Such a proposal was mooted by the Federal Reserve System as early as 1947. Developed countries in Europe and the underdeveloped countries have combined these two requirements in varying forms. The objectives sought to be served have also been varied, such as, to tackle the problem of excess reserves; resolving conflict between debt management and monetary policy. (conflict arising due to growth in volume of public debt in the developed

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1. J. Tinbergen in his schematic framework for development planning holds that the planner will have to concern himself with financial flows that take place between five sectors - central bank, commercial banks, private sector, public sector and 'external' accounts. There will nevertheless be some degree of freedom and some monetary measures could be used with these degrees of freedom. He suggests that the reserve ratio method may be used to increase liquidity without creating undesirable consequences (J. Tinbergen "Development Planning" (1967) P. 171-72.)

countries and the need for assisting borrowing programmes of the government and keeping inflationary pressures under check in the underdeveloped countries) and so on.[1]

Use of Variable Reserve Ratios in India:-

It was only under the 1956 Amendment to the Reserve Bank of India Act[2] that the Bank was empowered to vary cash reserve requirements from 2% to 8% against 'Time' and 5% to 20% against 'Demand' liabilities. In addition to these cash reserve ratios scheduled banks have been required to maintain secondary reserve ratio in such a manner that they should hold cash, gold and other unencumbered securities equal to not less than 20% (later raised to 25% in 1962) of their total deposit liabilities. The secondary reserve ratio has become a part of the Bank Rate and open market policies as we saw earlier.

Policy measures of March, 1960:-

In the busy season of 1959-60, the Reserve Bank ushered in a policy of general credit squeeze and for the

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1. Tamagna notes illustrations of various methods wherein 'reserve requirements' have been used as an instrument for seasonal adjustments (as in New Zeland) or their adaptation to purposes and uses of selective controls (as in Maxico). Refer Tamagna in 'Monetary Management' op. cit. Pp. 115-120.

2. The Reserve Bank of India Act laid down that a bank in India would maintain with the Reserve Bank or with itself (in case of scheduled banks) or with the Reserve Bank (in case of non-scheduled banks) minimum cash reserve of 2% against their 'time' and 5% against their demand liabilities.

first time since its establishment wielded the measure of variations in cash reserve ratios. In March, 1960 the Reserve Bank directed all scheduled banks to impound with it 25 per cent of any additions to their Demand and Time liabilities after March 11, 1960 over and above the cash reserves required of them to be maintained with the Bank (the 5 per cent and 2 per cent rule). In May, 1960 the impounding requirement was raised to 50 per cent level to apply to deposits accruing to a bank from May 6, 1960. Granting the general proposition that marginal reserve requirement would hit the fast growing banks hard, the Reserve Bank was quite rational in applying this measure when it had agreed to pay interest for each half year, on the impounded reserves, "at the average rate of interest paid for the half year by the scheduled bank concerned on its total deposits". The rate was later enhanced to "one-half of one per cent over the average rate of each bank".[1] The variable reserve ratio policy however remained a short-lived experiment with the Bank, for with the onset of the busy season of 1960-61 the Bank had to suspend any further impounding as from November 11, 1960 and the entire policy of additional reserve requirements was abandoned from January 13, 1961 (the policy thus remained in operation for ten months).

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1. H.V.R. Iengar - "Monetary Policy and economic growth", Vora & Co., Bombay (1962) P. 197.

It would be in order to look into the continuum of forces that made the measure to be one of short-lived (March 1960 to January, 1961) experimentation. Data in Tables 6(11) and 6(12) together throw light on these.

TABLE 6(11)

Portfolio behaviour of scheduled banks 1959 slack to 1960-61 busy seasons.

(Amount in Crores of Rupees)

Year (Season)	Aggregate Deposits	Bank Credit	Borrowings from R.B.I.	Investments.
S 1959	+ 106.46	- 78.95	- 13.35	+ 178.00
B 1959-1960	+ 130.85	+ 188.93	+ 29.80	- 52.49
S 1960	- 23.26	- 20.31	- 27.02	- 52.33
B 1960-1961	+ 9.34	+ 198.53	+ 21.53	- 126.32

Source:- Currency and Finance Report 1962-63.

Behaviour of commercial banks during the slack season of 1959 was as such one of normalcy. Bank credit was reduced by Rs. 78.95 crores and deposit accrual was of the order of Rs. 106.46 crores (Table 6(11) above). The slack season investments by banks however caused grave concern with the Reserve Bank, as they were on high side relative to earlier slack seasons.

Table 6(12) below shows variations in Investments and bank credit for the years 1956 to 1959 and provides a clue for the action of the Reserve Bank in resorting to the measure of variable reserve ratios of which infrequency is an attribute:

TABLE 6(12)

(Amount in Crores of Rupees)

Year (December) end.	Bank Credit	Variation over previous year.	Investment.	Variation over previous year.
1956	744	-	364	-
1957	874	+ 130	364.8	+ 0.8
1958	893	+ 19	517.7	+ 152.9
1959	962	+ 69	690.2	+ 172.5

Source:- "Trend and Progress of Banking in India" (1960) P.60.

Although bank credit was reduced by Rs. 78.95 crores during slack 1959 (Table 6(11)) it was higher by Rs.69 crores (Table 6(12)) at the end of 1959 (over 1958) which denotes magnitude of overall expansion in bank credit during the year 1959. Posited against this was the increase in Investment of the order of Rs. 153 and 172 crores at the end of 1958 and 1959 over the previous years (Table 6(12)). The busy season of 1959-60 thus opened with possibilities of excessive credit expansion by commercial banks. Busy season credit expansion was of the order of Rs.188.93 crores

(Table 6(11)) which was the highest figure of seasonal variation in bank credit so far.[1] The banks had the wherewithal to feed excessive expansion through ~~a~~ disinvestment and as Table 6(11) shows disinvestment during the busy season 1959-60 was to the tune of Rs.52.49 - crores. Busy season disinvestment was at a level of around Rs. 25 crores and below in all previous years (except Rs. 36.93 crores in 1955-56).

> Reserve Bank's account of the situation was that:
>
> "there was a high degree of liquidity in the banking system, the investment-deposit ratio continued to remain high and stood at 47 in January, 1960 ... bank credit appeared to be larger than warranted by genuine requirements of trade and industry .... prices began to move up .... the stock market too was characterised by boom conditions ... the situation called for some corrective action towards an abatment of monetary demand".[2]

It was thus out of the major consideration that the banks may ooze excessive liquidity during the slack season of 1960 and aggrevate inflationary pressures that the Bank came out with the measure of impounding of additional reserves.

Response to this hitherto untried measure during the slack and busy seasons of 1960-61 as accounted for by the Bank was as under:

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1. The reserve ratio measure was enforced in about middle of March while the busy season ended in April. There is, therefore, slight overstatement in expansion of credit.

2. "Trend and Progress of banking in India" (1960) P.14.

"Slack season of 1960: "The trends in the 1960 slack season were appreciably different from those in the earlier slack seasons ... the contraction of credit was markedly lower, being only of the order of Rs. 20 crores[1] as compared to Rs. 79 crores and Rs. 118 crores respectively in the slack season of 1959 and 1958. Scheduled banks' deposit liabilities showed a contraction of Rs. 23 crores in the 1960 slack season as against a substantial rise of Rs. 107 crores in the preceding slack season. The banks also reduced their borrowings from the Reserve Bank by Rs. 27 crores. As a result of these factors, banks' portfolio of government securities showed a decline of Rs. 52 crores as against a rise of Rs. 178 crores in the previous slack season".[2]

The contra-seasonal contraction of deposits of Rs. 23 crores (1960 slack) has to be ascribed to the 'impounding' measure. There was no net decline in bank deposits in any of the years prior to 1960-61. Again, the disinvestment of the order of Rs. 52 crores was another contra-seasonal trend not to be seen in any of the years prior to 1960 - which meant that the impounding measure had its pinch on the banks. Behaviour of the banks in reducing their borrowings from the Reserve Bank was quite normal.

Against these two contra-seasonal trends of slack 1960, the demands of the busy season 1960-61 created further pressures. Reserve Bank's account of it (and the steps taken) reads as under:

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1. Refer Table 6 (11) above.

2. 'Currency and Finance Reports' (1960-61) P.38.

"Busy Season 1960-61: On the eve of the busy season of 1960-61 the scheduled banks' liquidity position was considerably strained because of the continued high level of credit, relative to the deposit resources ... in consonance with its policy of operating its controls in a flexible manner, the Reserve Bank removed in two stages ... the provisions relating to additional reserve requirements".[1]

The busy season (1960-61) trends justified the Bank's action for the growth in deposits was of the small order of Rs. 9.34 crores as against Rs. 130.85 crores in the previous busy season and superimposed on the contra-seasonal liquidation of investment (of slack 1960) the normal busy season liquidation was as high as Rs. 126.32 crores (as against a decline in investment of only Rs. 52.94 crores in the previous busy season[2] (vide Table 6(11)). Bank credit during the season was however high at Rs. 198.53 crores (as against Rs. 188.93 crores in the previous busy season). These factors led the Bank to judge that the banks' liquidity position was strained. The Bank thought that on the one hand its duty was to relieve banks of their strained liquidity position and on the other to keep credit expansion under check and since "the major factors contributing to this large expansion were the continued upswing in industrial activity and special causes operating towards accumulation

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1. "Currency and Finance Report" (1960-61) Pp. 38-39.

2. The higher figure of Rs. 126.32 crores was partly attributable to transfer of P.L. 480 funds from the State Bank of India to the Reserve Bank of India.

of stocks of raw cotton and sugar with mills"[1], the Bank thought it fit to place reliance on selective controls.

Evaluation of the March 1960 measure :

It may be recalled that in preferring the reserve ratio method the Bank had felt that selective controls were "not designed to counter general inflationary pressures".[2] Such general inflationary pressures arose, according to the interpretation of the Bank, out of the fact that "unlike in the previous years when bank credit to Government was the major influence, bank credit to private sector (in the beginning of the year 1960) constituted the largest single factor for monetary - expansion".[3] It may be enquired as to how far one can justifiably make a distinction between the inflationary potential of bank credit to Government and the private sector. If we further grant the proposition that the reserve ratio method derives its strength for attacking emergency situations, it may seem reasonable to argue that the Bank was rather reading too much in the situation when it deployed the reserve ratio method. It was possibly led into this predicament due to the ambivalent nature of its policy goal of 'controlled expansion'. Discretionary monetary management has an element of ambivalence about it and one characterised by a policy goal of 'controlled

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1. "Currency and Finance Report" (1960-61) P. 39.
2. "Trend and Progress of Banking in India" (1960) P. 14.
3. Ibid. "Trend and Progress of Banking in India"(1960) P.14

expansion' tends to have more of it.

Equivalence of reserve requirements in 1962 :

With the Amendment of the Reserve Bank of India Act in 1962, separate ratios for time and deposit liabilities were done away with and a uniform cash reserve ratio of 3% subject to maximum variability to 15% together with an enhanced liquidity ratio of 25% came into force. Since the average of the separate ratios of 2 and 5 percent was 3.5 the new provision meant in effect a lowering of the cash reserve ratio by 0.5 percentage points.[1]

The scheduled banks in India have been maintaining cash reserve ratio of about double the minimum requirement and above (vide Table 6(13)). Net free reserves of the scheduled banks were -4 percent of the total deposits during 1956 which was the highest level during the years 1951-66.[2] Net free reserves of banks in Pakistan, as noted by Porter[3] were sometimes negative to the extent of 20 percent.

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1. This is on the assumption that the ratio of Time to Demand Deposits is 1:1. If the ratio of Time to Demand deposits is greater than 1 even under the old differential system the combined average ratio will be less than 3.5. The combined average ratio will be equal to 3 if the ratio of Time to Demand deposit is 67:33 and less than 3 if the ratio is higher than this. Since the ratio of Time to Demand Deposits was 98:100 and less, before 1957-58 and was progressively rising reaching 122:100 in 1965-66, we could say that the combined average cash reserve ratio under the differential system would remain below the average of 3.5 percent. Hence the uniform ratio of 3% did not in fact mean so much of lowering the reserve requirement as may be supposed.
2. Negative free reserves for other relevant years have been less than 2 percent of total deposits.
3. Porter - Ibid.

TABLE 8(15)

Cash ratio and Net free Reserves of Scheduled Banks 1951-66.

(Amount in Crores of Rupees)

Year (average of Friday figures).	Total deposits	Total of cash and balances with Reserve Bank	Percentage of (2) to (1)	Borrowings from Reserve Bank	Excess Reserves.	Net free Reserves (5 - 4)
	1	2	3	4	5	6
1951	869	96.39	11.1	4.72	22.92	+ 18.20
1952	834	85.97	10.3	18.99	18.32	- 0.67
1953	839	77.93	9.3	7.81	12.83	+ 5.02
1954	893	85.05	9.5	16.09	17.11	+ 1.02
1955	981	86.22	8.8	17.73	14.44	- 2.29
1956	1069	87.70	8.2	53.18	10.05	- 43.13
1957	1249	112.03	9.0	57.55	26.48	- 30.07
1958	1502	123.46	8.2	16.14	30.76	+ 14.62
1959	1720	116.50	6.8	18.47	16.22	- 2.25
1960	1913	142.56	7.5	38.40	11.13	- 27.27
1961	1776	124.49	6.7	28.16	13.57	- 14.59
1962	1983	132.06	6.5	16.60	14.11	- 2.49
1963	2136	135.62	6.3	19.42	12.81	- 6.61
1964	2395	153.19	6.4	29.18	12.89	- 16.29
1965	2755	172.76	6.3	62.35	13.25	- 49.10
1966	3119	194.56	6.2	24.70	15.75	- 8.95

Concluding remarks :

On a comparative basis, it could be said that cash reserve ratios have been fixed at higher percentage levels in developed countries like U.S.A., West Germany, Belgium and underdeveloped countries like Cuba, Philippines and South Korea relative to the ratios fixed in India. On the other hand, Japan provides a strikingly different example where legal reserve ratios were non-existent before 1957. Under the reserve requirements law passed in 1957 Bank of Japan was authorised to vary the reserve ratio to a maximum limit of 10 percent but with no minimum ratio i.e. effective minimum rate could be zero. The tendency of the City banks in Japan to remain heavily indebted to the Bank of Japan together with a currency drain of 20-25 percent has precluded the use of reserve requirements in Japan in a significant manner.

We may indeed like to enquire what, if any, is the proper level of reserve requirements but as W.L. Smith points out "reserve requirement policy must be considered in relation to the totality of monetary and fiscal policy in a growing economy".[1] Raising reserve requirements may induce banks to liquidate their investments with destabilizing effects on security markets (this has been the experience in India during 1960-61) and this may not be consistent with the requirements of growing

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1. W.L. Smith in "Monetary Management" op.cit. P.248.

public debt as in underdeveloped countries. Secondary reserve requirements would partly remove this destabilizing effect but higher reserve requirements may adversely affect 'banking expansion' which again is an important structural need. Furthermore, the higher currency drain reduces the credit expansion coefficient and this consideration alone reduces the importance of reserve requirements policy in underdeveloped countries. Indian conditions present a peculiar situation in this behalf. Cash ratios with banks are generally low (around 6%) but the currency drain is heavy. As seen from Table 3(3)[1] ratio of currency to money supply (currency plus demand deposits) which was 0.652 in 1951-52 went on increasing and reaching 0.708 in 1955-56 declined to 0.693 in 1957-58 and again increased to 0.719 in 1962-63 (reaching 0.731 in 1960-61) and then came down to 0.670 in 1965-66. Taking these variations together it may be safely concluded that the currency drain in India continued to remain high during all the three Plan periods. This was partly compensated by reduction in cash ratios of scheduled commercial banks from 9.6 in 1951-52 to 5.8 in 1965-66.

The higher currency ratio gives a low value of the credit multiplier which amounts to saying that the Reserve Bank would not be in a position to bring down the quantum of money supply with immediate effect in times of inflation. Since variability in the reserve ratio in the downward direction is not feasible and its effectiveness

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1. Chapter 3.

in curbing inflationary pressures is limited, use of this instrument holds dim prospects under present conditions, apart from the detrimental effect it could have on the process of banking expansion in general. The proposition that variable reserve ratios should be used in times of emergency however, stands.